PATENT/302 NOM

## ttorney Docket No. IMMR-086/02US

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

re application of Louis B. ROSENBERG et al.

Serial No.:

10/782,878

Examiner:

Unassigned

Filed:

February 23, 2004

Art Unit:

2672

Confirmation No. 7078

For:

DESIGNING FORCE SENSATIONS FOR FORCE FEEDBACK COMPUTER

**APPLICATIONS** 

U.S. Patent and Trademark Office 220 20<sup>th</sup> Street S. Customer Window Crystal Plaza Two, Lobby, Room 1B03 Arlington, VA 22202

#### INFORMATION DISCLOSURE STATEMENT TRANSMITTAL

Enclosed is an Information Disclosure Statement and accompanying Form PTO/SB/08A for the above-identified patent application.

[x]	In accordance with 37 C.F.R. §1.97(b), no additional fee for submission of the IDS is required.
[]	In accordance with 37 C.F.R. §1.97(c), also enclosed is:
	[] the fee of \$180.00 as set forth in 37 C.F.R. §1.17(p); or
	[] a statement as specified in 37 C.F.R. §1.97(e).
[]	In accordance with 37 C.F.R. §1.97(d), a statement as specified in 37 C.F.R. § 1.97(e) and the fee of \$180.00 as set forth in 37 C.F.R. §1.17(p) are also enclosed.
[]	Check No in the amount of \$ for the total fee is attached.
[]	A return receipt postcard is also enclosed.
[]	Please charge \$ to Deposit Account No. 50-1283 for the total fee. This paper is being submitted in duplicate

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The Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R. §§1.16, 1.17, and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 50-1283.

Dated: October 7, 2004

Cooley Godward LLP ATTN: Patent Group One Freedom Square Reston Town Center 11951 Freedom Drive Reston, VA 20190-5656 Tel: (703) 456-8000

Fax: (703) 456-8100

By:

Erik B. Milch Reg. No. 42,887

Respectfully submitted,

**COOLEY GODWARD LLP** 

220320 v1/RE 4Q0001!.DOC Attorney Docket No. IMMR-086/02US

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# INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.97(b)

In accordance with the duty of disclosure set forth in 37 C.F.R. §1.56, Applicant(s) hereby submits the following information in conformance with 37 C.F.R. §§1.97 and 1.98.

- [x] Pursuant to 37 C.F.R. §1.98, a copy of each document cited in the attached Form PTO/SB/08A (1 of 2) is provided on the enclosed CD.
- [x] No copies of the publications listed on the attached Form PTO/SB/08A (2 of 2) are being provided pursuant to 37 C.F.R. §1.98(d) because the publications were previously cited by or submitted to the Office in prior Application Serial Nos. 09/734,630 (now U.S. Patent No. 6,697,086 B2), 08/846,011 (now U.S. Patent No. 6,147,674) and/or 08/566,272 (now U.S. Patent No. 5,734,373) to which the above-identified application claims priority under 35 U.S.C. §120.
- [] No copies of any U.S. patents or U.S. patent application publications listed on the attached Form PTO/SB/08A are being provided pursuant to 37 C.F.R. §1.98 because this application was filed after June 30, 2003.

[]	Publication	(s) listed on th	e attached Form PTO	/SB/08A were cited in	a
	foreign sear	ch or examination	report corresponding	g to application	
	serial no.	and mailed on			

[]	Enclosed is a copy of a non-English publication(s) Pursuant to §609
	of the M.P.E.P., Applicant submits the attached foreign search or
	examination report, which cites such non-English language publication(s)

Attorney Docket No.: IMMR-086/02US Serial No.: 10/782,878

				Page 2
[]	publi			ication(s) English language iority from this non-English
[]		osed is an explanation of r sh translation is not availa	_	h publication(s) for which an
[]		osed is an English translate attached Form PTO/SB/0		-English publication(s) cited
[]	Enclo	osed is a copy of pending	patent App	olication Serial No
This time periods		ntion Disclosure Statemen	t is filed w	ithin any one of the following
	[]	within three months fro other than a CPA under		g date of this national application § 1.53(d);
	[]			of entry of the national stage as is international application;
	[x]	before the mailing date	of a first o	office action on the merits; or
	[]			action after the filing of a under 37 C.F.R. § 1.114.
It is 1	respectfi	ully requested that the Exa	aminer con	sider the above-noted
information	and retu	irn an initialed copy of the	e attached l	Form PTO/SB/08A to the
undersigned	•			
Dated: Octo	ber 7, 20	<u>004</u>		Respectfully submitted, COOLEY GODWARD LLP
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Substitute for form 1449A/PTO					Complete if Known
				Application Number	10/782,878
INFO	RMATION	DIS	SCLOSURE	Filing Date	February 23, 2004
STATEMENT BY APPLICANT			PPLICANT	First Named Inventor	Louis B. Rosenberg
				Art Unit	2672
	(use as many she	eets a	s necessary)	Examiner Name	Unassigned
Sheet	1	of	3	Attorney Docket Number	IMMR-086/02US

			U.S. PATENT DOC	ONICIA I O	
Examiner	Cite No.1	Document Number  Number Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant
	110.	<del>-</del>			Figures Appear
		6,422,941	7/23/2002	Thorner et al.	
		6,160,489	12/12/2000	Perry et al.	
		6,111,577	8/29/2000	Zilles et al.	
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		4,464,117	8/7/1984	Foerst	
		4,333,070	6/1/1982	Barnes	
		4,262,549	4/21/1981	Schwellenbach	<u></u>
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		2,972,140	2/14/1961	Hirsch	

Examiner Initials*	0:4-	Foreign Patent Document			Name of Patentee or	Pages, Columns, Lines,	
	Cite No. <sup>1</sup>	Country Code <sup>3</sup>	Number⁴	Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Applicant of Cited  Document	Where Relevant Passages or Relevant Figures Appear
		JP	H2-185278		7/19/1990	Taito Corporation	
		JP	H4-8381		1/13/1992	Epoch Co. and Key- Planning Co.	
		JP	H7-24147		1/27/1995	Sega Corporation	
		JP	H5-192449		8/3/1993	Taito Corporation	

Examiner Signature	Date Considered	

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<sup>&</sup>lt;sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Kind Codes of U.S. Patent Documents at www.uspto.gov or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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Examiner nitials *	Cite No.1	Include name of the author (in CAPITAL LET item (book, magazine, journal, serial, sym number(s), publisher, cit	posium, catalog,	etc.), date, page(s), volume-issue		
		PATRICK, "Design, Construction, and Testing of a Fir Environments," <i>Master of Science Thesis</i> , MIT, Aug.				
		CALDER, "Design of A Force-Feedback Touch-Introd Science Thesis, MIT, May 1983, archived June 23, 19		Teleoperator Robot Control," Bachelor of		
		WIKER, "Teletouch Display Development: Phase 1 Ro San Diego, July 1988.	eport," <i>Technical R</i>	eport 1230, Naval Ocean Systems Center,		
		BLISS, "Optical-to-Tactile Image Conversion for the B 11, No. 1, March 1970.	Blind," IEEE Transa	ctions on Man-Machine Systems, Vol. MMS-		
		JOHNSON, "Shape-Memory Alloy Tactile Feedback AAMRL-TR-90-039, August, 1990.	Actuator," Armstron	g Aerospace Medical Research Laboratory.		
		KONTARINIS et al., "Tactile Display of Vibratory Infor PRESENCE, 4(4):387-402, Harvard Univ., 1995.	mation in Teleoper	ation and Virtual Environments,"		
		AUKSTAKALNIS et al., "Silicon Mirage: The Art and S 1992.	Science of Virtual R	reality," ISBN 0-938151-82-7, pp. 129-180,		
		EBERHARDT et al., "Inducing Dynamic Haptic Percel DSC-Vol. 55-1, <i>Dynamic Systems and Control</i> : Volum		System Description and Some Results,"		
		GOBEL et al., "Tactile Feedback Applied to Computer Vol. 7, No. 1, pp. 1-24, 1995.	r Mice," Internation	al Journal of Human-Computer Interaction,		
		ition; McGraw-Hill, ISBN 0-07-050167-X, pp.				
		*Cyberman Technical Specification," Logitech Cyberman SWIFT Supplement to Logitech Mouse Tech Reference and Programming Guide, 4/5/1994.				
		OUHYOUNG et al., "The Development of A Low-Cost Environment," Proceedings of the Third Pacific Confe. Graphics '95, Seoul, Korea, 21-24 August 1995.				
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		LAKE, "Cyberman from Logitech," at http://www.ibiblio	o.org/GameBytes/is	ssue21/greviews/cyberman.html, 1994.		
		"Component Maintenance Manual With Illustrated Flight Instrument Corporation, Revised 28 January		Control Shaker Part No. C-25502," Safe		
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OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS					
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			
		"Technical Manual Overhaul Instructions With Parts Breakdown, Coaxial Control Shaker Part No. C-25502," Safe Flight Instrument Corporation, Revised 15 July 1980 (23 pages).			
		SCANNELL, "Taking a Joystick Ride," Computer Currents, Boston Edition, Vol. 9, No. 11, November 1994			
		ROSENBERG, "Virtual Fixtures: Perceptual Overlays Enhance Operator Performance In Telepresence Tasks," Ph.D. Dissertation, Stanford University, June 1994.			

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Examiner		Date	]
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_		2,906,179	09-1959	Bower	
		3,490,059	01-1970	Paulsen et al.	
		3,531,868	10-1970	Stevensen	
		3,875,488	04-1975	Crocker et al.	
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		3,919,691	11-1975	Noll	
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		4,148,014	04-1979	Burson	
		4,216,467	08-1980	Colston	
		4,398,889	08-1983	Lam et al.	
		4,448,083	05-1984	Hayashi	
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		4,800,721	01-1989	Cemenska et al.	
		4,803,413	02-1989	Kendig et al.	

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		4,811,608	03-1989	Hilton	
		4,819,195	04-1989	Bell et al.	
		4,839,838	06-1989	LaBiche et al.	
		4,849,692	07-1989	Blood	·
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·		5,223,776	06-1993	Radke et al.	
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		5,243,266	09-1993	Kasagami et al.	
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		5,264,768	11-1993	Gregory et al.	
		5,275,565	01-1994	Moncrief	
		5,289,273	02-1994	Lang	

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Substitute for form 1449A/PTO	Complete if Known		
	Application Number	10/782,878	
INFORMATION DISCLOSURE	Filing Date	February 23, 2004	
STATEMENT BY APPLICANT	First Named Inventor	Louis B. Rosenberg	
	Art Unit	2672	
(use as many sheets as necessary)	Examiner Name	Unassigned	
Sheet 4 of 11	Attorney Docket Number	IMMR-086/02US	

		1	U.S. PATENT DOC	OINIEIN I 9	······································
Examiner	Cite No.1	Document Number  Number Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		5,296,846	03-1994	Ledley	
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		5,354,162	10-1994	Burdea et al.	
		5,379,663	01-1995	Hara	
		5,384,460	01-1995	Tseng	
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		5,405,152	04-1995	Katanics et al.	
		5,412,880	05-1995	Raab	
		5,414,337	05-1995	Schuler	
		5,417,696	05-1995	Kashuba et al.	
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		T-	U.S. PATENT DOC	UMENTS	
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		5,889,670	03-1999	Schuler et al.	

		Foreign Patent Document			Name of Patentee or	Pages, Columns, Lines,	
	Cite No. <sup>1</sup>	Country Code <sup>3</sup>	Number⁴	Kind Code <sup>6</sup> (if known)	Publication Date MM-DD-YYYY	Applicant of Cited  Document	Where Relevant Passages or Relevant Figures Appear
		JP	4-34610				
		GB	2254911				
		wo	9520787				
		wo	9616397				
		wo	9622591				

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INFORMATION DISCLOSURE	Filing Date	February 23, 2004	
STATEMENT BY APPLICANT	First Named Inventor	Louis B. Rosenberg	
	Art Unit	2672	
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Sheet 6 of 11	Attorney Docket Number	IMMR-086/02US	

Examiner Cite No.1	Cita	Foreign Patent Document			Name of Patentee or	Pages, Columns, Lines,	
		Country Code <sup>3</sup>	Number⁴	Kind Code <sup>6</sup> (if known)	Publication Date MM-DD-YYYY	Applicant of Cited  Document	Where Relevant Passages or Relevant Figures Appear
		wo	9642078				
		EP	0626634	A2			
		EP	0875819	A1			
		wo	9502801				
·		wo	9520788				
		wo	9532459				
		wo	9731333				

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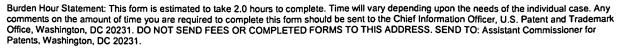
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		OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS
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(use as many sheets as necessary)	Examiner Name	Unassigned	
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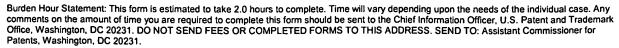
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Substitute for form 1449A/PTO	Complete if Known	
	Application Number	10/782,878
INFORMATION DISCLOSURE	Filing Date	February 23, 2004
STATEMENT BY APPLICANT	First Named Inventor	Louis B. Rosenberg
	Art Unit	2672
(use as many sheets as necessary)	Examiner Name	Unassigned
Sheet 11 of 11	Attorney Docket Number	IMMR-086/02US

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			
		Smith, Geoffrey, "Call It Palpable Progress," Business Week, Oct. 9, 1995, pp. 93, 96.			
		Snow, E. et al., "Compact Force-Reflecting Hand Controller," JPL, Apr. 1991, vol. 15, No. 3, Item No. 153, pp. 1-15a.			
		Su, S. Augustine et al., "The Virtual Panel Architecture: A 3D Gesture Framework," IEEE 1993, pp. 387-393.			
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		Tavkhelidze, D.S., "Kinematic Analysis of Five-Link Spherical Mechanisms," Mechanism and Machine Theory, 1974, vol. 9, pp. 181-190.			
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		Winey III et al., "Computer Simulated Visual & Tactile Feedback as an aid to Manipulator & Vehicle Control," MIT, 1981, pp. 1-79.			

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